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The Meat That Comes from Milk

By C. Houston Goudiss

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The Health and Strength Value of Cheese as a Main Dish in the Daily Diet

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THE HEALTH AND STRENGTH VALUE OF CHEESE AS A MAIN DISH IN THE DAILY DIET

IF YOU knew of a butcher-shop where only the best grade of meat was sold, and where all bone, gristle and surplus fat—all waste—were removed from the meat before it was weighed out to you, *and* where you paid for this wasteless food material no more than you now pay for bone, gristle, meat and surplus fat combined—well, you would know the millenium had arrived!

If the millenium depended only on such a state of affairs, it arrived at least a thousand years before Christ, and was ushered in by whoever it was that first made cheese.

The name of that great benefactor of the race is not known. But the meaning of his gift to mankind has grown clearer through the ages, and to-day it is accepted by most peoples as one of the foremost of sustaining food materials.

A food which more than fulfills the fancy of the first paragraph of this article, since it not only is a wasteless "meat," but far richer in actual fuel value than the edible part of the best cuts of beef.

We measure food-fuel values in "calories"—heat units. The pound of whole milk cheese you bring home from the grocer's represents 1950 calories, while the edible portion of the best sirloin steak you buy at the butcher's represents only 1270 calories. In order to get a pound of that edible portion you must buy more than weight, for there is a considerable percentage of waste even in round steak. Yet the cheese is virtually wasteless.

A Match for Meat in Values

"But there is no waste at all to a loaf of baker's bread," you say, "yet it can't take the place of meat."

Just here we come to the most remarkable fact connected with cheese. And I am pleased to use quotation marks in stating it, because of the authority back of the assertion.

"So far as its composition is concerned, cheese is entitled to be considered as directly comparable with meat."

This is the official verdict of the United States Government. And while we are making use of Uncle Sam's expert knowledge on this subject, it is well to hear what he has to say about the digestibility of cheese.

"Of course, it takes a strong stomach to deal with cheese," you say—because wrong use of this food has supplied some ground for this wrong notion, which still prevails among a good many persons. Being a food of highly concentrated value, to eat even a small piece of cheese at the close of a heavy

dinner, or to make it the *pièce de résistance* of a midnight supper, naturally taxes the already busy department of the interior. The same amount of bacon, eaten in the same way at the same time, would have done the same thing.

As Digestible as All Staple Foods

To settle this matter of the digestibility of cheese, the United States Department of Agriculture carried on a series of nutritional experiments a few years ago, and the conclusion reached was thus set forth in an official bulletin:

"When eaten raw or carefully cooked, cheese is as thoroughly digested as other staple foods, and is not likely to produce physiological disturbance. The fact that cheese, like meat, contains neither starch nor cellulose, suggests that, like meat, it should be combined with bread, potatoes and other starchy foods, with vegetables and with sweets. The high percentage of fat in cheese suggests the use of correspondingly small amounts of fat in the accompanying dishes, while the soft texture of cheese dishes, as compared with meat, makes it reasonable to serve the harder and crustier breads with them. In order that the diet may remain well balanced, cheese, if used in quantity, should replace foods of similar composition rather than supplement them."

To this indisputable evidence let me add that digestion can also be promoted by grating it so as to give the gastric juices a chance to act upon the fat which surrounds the particles of casein like an envelope, thus preventing the gastric juices from coming readily in contact with the fat. One difficulty seems to be that cheese is frequently not chewed enough and the digestive organs have to cope with lumps of the material. Another factor in its digestibility is the temperature at which it is cooked. Like

all proteid foods it is toughened and hardened by a high temperature. We all know the stringy indigestible Welsh rarebit one gets from overcooking, and for the same reason, in combining cheese with macaroni, rice or honey, it is well not to allow the cheese to be at the bottom of the dish but to protect it from the high temperature, by putting it between layers of starchy material. Its digestion can also be promoted by the addition of a small amount of potash (old fashioned saleratus) or of baking soda, which makes the cheese soluble and therefore more digestible. Sometimes after cheese has become tough from the action of too high a temperature, it may be again made soft by these substances. When properly used and eaten there is no evidence that cheese is not as digestible as any other highly concentrated food.

The Virtues of Milk in Solid Form

THE highest praise that can be given any food is to say it is like milk, for milk is the one complete nutrient. When it comes to cheese, we can go to the limit of such praise, for it *is* milk—all milk and nothing else! It therefore stands almost at the head of our list of foods.

It is milk with the 87 per cent of water found in whole milk reduced to about one-third that amount and with the invaluable food elements of the milk remaining in concentrated form.

Cheese is one-third casein—the most important protein of milk—and where made from whole milk, it contains all the fat of the white fluid without

which the human race could not exist. Cheese also is rich in the mineral salts of milk—lime and phosphorus—which are necessary to the proper maintenance of the body and which are most likely to be lacking in the diet of the average person.

It is the protein of meat that makes this particular form of food highly valuable to man—the protein and the flavor. But science has proved that the protein of milk is the best of all forms of this builder and repairer of body tissue, and in cheese we have this protein in compressed form—much in little. As to flavor—cheese speaks for itself.

And Cheese Has Vitamines!

As if Nature were bent on providing one solid food as perfect as milk is in its way, cheese has the added and highly valuable advantage of being a vitamine-bearing food.

Milk is known to be richer than any other foodstuff in these protective elements which are so necessary to physical growth and welfare, and where cheese is made of whole milk, it passes along to the ultimate consumer the fat-soluble vitamines of whole milk. The housewife who wants to know can always find out whether it is a skim milk or a whole milk cheese she is buying, for the law requires that the difference be marked on the label. But if she knows it is a cheese made in Wisconsin, which supplies half of the country's output, that is enough—for the law of that state prohibits the manufacture of any but whole-milk cheese. The New York brand on full cream or cheddar cheese is also a guarantee

that it is made of whole milk. Cheddar cheese can also be made from skim milk, but the label tells the story to the buyer who is interested in the quality purchased.

How and Where It Is Made

THERE are dozens of different kinds of cheese—different in shape, color, odor and texture—but all of the various members of this large food family may be traced to the same beginning—milk. Some few owe their existence to goat's milk, but the majority claim direct descent from the cow.

Cheese is made by curdling whole or skimmed milk with rennet, separating the liquid whey from the semi-solid curd, and pressing the remaining solid. Then, with or without added flavoring of salt, sage or bread crumbs, the pressed shapes are "cured" in cellars, storehouses or caves, under varying degrees of temperature and for varying lengths of time. This, in brief, is the process followed in the manufacture of every kind of cheese.

The making of cheese requires the utmost care in every step from start to finish. The digestibility of cheese depends largely upon the perfection of its ripening and this in turn upon the materials, temperature, cleanliness, precision or strength of the ferment used and the skill with which the work is carried on. Cheese, like butter fat, readily absorbs any foreign odor or flavor, either of which may lessen its value. The degree of moisture and of temperature in which the cheeses are permitted to ripen has much to do with their characteristic flavor and

texture. The flavor also depends on the varieties of bacteria and molds used during the ripening process, each species producing special changes which give characteristic flavors. The ripening process continues for weeks and in some cases for months, the flavor slowly growing stronger and the cheese more palatable as time progresses.

Cheese that is made from whole milk has, of course, a higher food-fuel value than that made from skimmed milk, yet one kind of skim-milk cheese—and one that can be easily made in any home—is so valuable as a food and so good that I propose to give it the place of honor in discussing the most popular varieties.

The Charm and Worth of Cottage Cheese

EVEN the name given to this form of cheese is attractive. And when one stops to think that it is quickly and easily made from skimmed milk which for many years has been largely wasted, its importance is magnified.

It is made by curdling the skimmed milk with a rennet tablet, then draining the whey from the curd through a piece of clean cheese-cloth and pressing or squeezing out all the moisture that may remain. The snowy mass which results may be salted to taste or enriched with a little cream or flavored and beautifully colored with ground pimentoes—a valuable meat substitute.

Here is a food amazingly rich in body-building materials, tempting to both the eye and the palate, and capable of being served in many ways. And one

which for economy is without parallel in the whole list of things we eat. If cottage cheese were made more carefully it would probably be more generally liked. Instead of the lumpy, flavorless stuff so often offered for sale it should be smooth and creamy in texture and mellow in flavor. To make such cheese the milk must be pure and clean, the temperature for souring must be carefully watched to prevent the formation of curd and the moisture must be carefully pressed out. Every home has occasionally left over milk, and every farm has quantities that could be used for this cheap and nutritious food if the art of making it were better understood.

"57" *Kinds and How to Select Them*

Of the making of cheeses, like the making of books, there would seem to be no end. There are two distinct classes, hard and soft, and under these come any number of variations.

The most popular soft cheeses are cottage, neufchatel, camembert, brie and English cream cheese. They are best when freshest and should be consumed soon after manufacture. The soft cheeses are believed to be more digestible than the hard, but this is due to the fact that few people masticate cheese thoroughly.

The hard cheeses most in favor are cheddar—so called from the fact that it was first made in Cheddar, England, though it is now made extensively in America, also—stilton, roquefort, gorgonzola, Swiss, limburger, pineapple and edam. Some of these, as brie and limburger, are notably odor-

iferous, and for this reason are not popular. Others, like gorgonzola and roquefort, owe their pungent flavor and odor to certain species of mold. While all these varieties are of foreign origin they are all now being well made in America and it is no longer necessary to depend upon imports for good cheeses. Far the most popular in this country is the cheddar type, most of which is produced in Wisconsin and New York state, though Pennsylvania, Michigan and Ohio also rank high in cheese manufacture.

Flavor and texture are the guides in cheese buying. A crumbly cheese feels mealy in the mouth and has an acid flavor that bites the tongue. It is cheese that has not been properly made and is not safe to use. A cheese full of holes has a flavor that is generally undesirable. A new cheese has a mild flavor and is tough and leathery in texture; it is too bland for cooking and is liable to become stringy; old cheese has a strong flavor and cooks to better advantage.

The color of cheese has little to do with its quality —a deep yellow is generally produced by the addition of coloring matter and does not necessarily indicate a rich cheese. Specks of mold on the outside of a cheese indicate poor pressing. Such a cheese will not keep so long as one that has been pressed and is smooth on the surface.

Amazingly High Food Values

EVEN cottage cheese, made from skimmed milk, has a higher food-fuel value per pound than the edible portion of sirloin steak. And when it comes

to Swiss, the nutritive worth of the beef is almost doubled. Full cream cheddar ranks second in this respect, and is followed by pineapple, roquefort, limburger and neufchatel.

It is this high food value that has been responsible for the mistaken notion regarding the healthfulness of cheese. Its flavor is so enticing that people have been led to over-eat of its concentrated food elements, or, as before stated, have made a condiment of a very rich food, and thus given the stomach too much of a burden.

Those who use cheese as it should be used, however—as a meat alternative, and accompany it with a plentitude of green vegetables and fruits, find it not only easy to digest, but remarkably sustaining.

In the fact that it is one of the most appetizing of foods dwells one of its chief virtues—for that which tempts the palate has a direct and most favorable action on the outflow of digestive juices both in the mouth and the stomach. Exhaustive experiments have shown that on the average 90 per cent of its proteins and 95 per cent of its fats are digested and are easily assimilated by the blood.

The food value of cheese is more generally appreciated in Europe and Asia than in the United States, our per capita consumption of 3½ to 4 pounds a year being much less than in Europe. In Great Britain it is a regular article of diet in the workingman's lunch, the average annual consumption before the war being 336,000,000 pounds. Throughout conti-

nental Europe the production and exporting of cheese is carefully supervised, it being classed as more of a necessity than butter.

Not a Relish but a Rich Food

Of course, if you continue to give cheese a bad name by eating it as a "relish" you will continue to find it somewhat burdensome to the stomach. Pursue the proper course, however, and give it a rightful place in the diet as a "meat" or main dish, and you will be surprised at the ease with which it is handled by the stomach.

For such uses, no other foodstuff is more convenient or adaptable to variations in form and flavor. This is especially true of the so-called American cheese when used in combination with other food materials. With macaroni, rice or hominy for instance, cheese forms an almost complete heating and energizing food—the starch of the macaroni supplying that deficiency in the cheese. Indeed, a dish of macaroni and cheese, with a liberal portion of salad made from lettuce or some other green and a fruit dessert constitutes a meal which can hardly be excelled for all-around food virtues.

Cheese always may be eaten raw, and for this reason it furnishes one of the most useful of ready-to-serve foods. It always can be had, even at the cross-roads general store, and now that it is put up in air-tight cans one can make sure of getting it fresh, and in such form as to be easily kept for almost any length of time in any climate.

It can be cooked in so many different combi-

nations—with eggs, starchy foods, and vegetables —that it is possible for the housewife to serve a main dish of cheese once or twice weekly for a whole year without repeating.

Yet we Americans, with an average annual per capita consumption of only a little more than three pounds of cheese, are not wise enough to make of this foodstuff anything like the use we should.

Why We Should Eat More Cheese

In the first place, we are not wise enough to make full use of a food which, despite its incomparable value as a provider of heat and energy and material for body building, is highly economical. This element of cost, of course, depends on the variety chosen. American cheese contains more nutriment than parmesan, and at half the price. Stilton is about the same in food value but twice as expensive. Roquefort, edam, parmesan, gruyere or gorgonzola are the so-called fancy cheeses and we pay a high price for their flavor. Cheese eaten for flavor is an expensive food. These rich, well-ripened cheeses are gently stimulating to the digestive membranes, like beef tea, and for this reason they are rightly used as a condiment. But when we speak of cheese as food, full cream American cheddar for cooking, Swiss and neufchatel, cream and cottage for salads and sandwiches are the kinds to be chosen and used freely.

On the average, one pound of cheese is equal in food value to three pounds of meat, as bought. And when it comes to convenience, keeping qualities

and absence of waste, there is no comparison between the two.

Common sense must lead us to a change. Cheese challenges us to larger consideration of its place in the daily diet. For the sake of our health, our pockets and the strength and welfare of posterity, we must be more loyal to this second-best gift from the cow. Wisconsin with its 2,000,000 dairy cattle and its 2,000 cheese factories, as well as the other American states that are making good cheeses of all kinds, should be encouraged to lead the world in the production of this wholesome, economical protein food.

RECIPES

Cheese Balls to Serve with Soup

Chop the white of one hard boiled egg very fine and rub the yolk through a fine strainer. Mix the two together with a few grains of cayenne, three tablespoonfuls of grated American cheese, one teaspoonful of milk or cream and the yolk of one raw egg. Work the mixture together until it is well blended, then shape in small balls not more than one-fourth inch in diameter. Drop into boiling consomme or broth and cook gently for five minutes.

Cottage or Pot Cheese

Put one quart of thick, sour milk in a deep bowl. Pour in one quart of boiling water and let stand five minutes. Then pour into a cheesecloth bag and let drain until all the whey has dripped out. This will take several hours. Do not squeeze the cheese or the curd will be tough and dry. When the whey has dripped through, turn the cheese out and season with melted butter, salt, paprika and a few grains of sugar.

Baked Bread and Cheese

Butter four slices of bread and cut each slice into four triangles or squares. Place a layer of these pieces, buttered side down, in a shallow baking dish. Mix one cupful of cottage or pot cheese with one-half teaspoonful of salt, a few grains of cayenne pepper, one-fourth teaspoonful of baking soda, one-half teaspoonful of onion juice and one-fourth cupful of milk. Spread a thick layer of the cheese over the bread. Cover the cheese with the rest of the bread, buttered side up. Beat two eggs and mix with one and three-fourths cupfuls of milk. Pour over the bread and bake in a slow oven (about 300 degrees) for forty minutes or until firm. Serve hot. One tablespoonful of chopped parsley or pimento or two tablespoonfuls of chili sauce or catsup may be mixed with the cheese to give variety of flavor.

Molded Cheese Salad

Soak two tablespoonfuls of gelatine in one-fourth cupful of cold water for ten minutes, then dissolve by standing over hot water. Mix two cupfuls of cottage cheese with one-half cupful of finely chopped pimento, green pepper or stuffed olives, one-fourth teaspoonful of paprika, two teaspoonfuls of salt, a few grains of cayenne, two teaspoonfuls of sugar and one cupful of milk. When well blended, stir in the dissolved gelatine and pack into a cold, wet mold. When firm, turn out, cut in slices and serve on lettuce with mayonnaise or French dressing. Use strips of pimento, slices of olives or halves of walnuts for garnishing.

Cheese Toast with Bacon

Melt four tablespoonfuls of butter, add four tablespoonfuls of flour and when well blended stir in two cupfuls of milk. Cook until thick and smooth, then add one-half to one teaspoonful of salt, one-half teaspoonful each of pap-

rika and Worcestershire sauce and one cupful of grated American cheese. Cook for two minutes longer, or until the cheese is melted. Pour over six large slices of toast and arrange two to four slices of broiled or fried bacon across the top of each portion. Serve very hot.

Cheese Sticks

Mix and sift one and one-half cupfuls of pastry flour and one-half teaspoonful of salt. Rub in one-half cupful of shortening, using a fork or two knives. Then add just enough ice water to make a stiff dough. Turn out on a floured board and roll to one-fourth inch thickness. Sprinkle with one-third cupful of grated, stale cheese and a little cayenne pepper. Roll the dough up like a jelly roll and then flatten out to one-fourth inch thickness. Spread with one-third cupful of grated cheese, fold and roll as before. Chill thoroughly, roll to one-eighth inch thickness and cut in strips about one-eighth inch wide and four or five inches long. Place on a greased baking pan and bake in a hot oven (400 degrees) about ten minutes or until a golden brown in color.

Roquefort Cheese Salad Dressing

Take two ounces or one-fourth cupful of Roquefort cheese, six tablespoonfuls of salad oil, three tablespoonfuls of vinegar, one-fourth teaspoonful of salt, one-fourth teaspoonful of paprika, and a few grains of cayenne.

Mash the cheese with a fork until it is smooth and creamy. Make a French dressing of the oil, vinegar and seasonings and add it gradually to the cheese. Serve on hearts of lettuce or romaine.

Cheese and Rice Croquettes

Mix one cupful of boiled rice with one cupful of thick white sauce made from four tablespoonfuls each of butter and flour and one cupful of milk. Add one cupful of grated, stale cheese, one-fourth teaspoonful of paprika and one teaspoonful of salt. A few grains of cayenne or one-half teaspoonful of grated onion my be added if desired. Mix thoroughly and spread out on a shallow plate to cool. When cold, shape as desired, roll in flour, then in beaten egg and fine bread crumbs. Fry in deep fat heated to 390 degrees or until it browns a piece of bread in forty seconds. Drain and serve with tomato, cheese or white sauce.

The egg used for dipping may be either white or yolk alone or the whole egg. In either case, dilute it with one tablespoonful of cold water.

Cheese Squares

Melt three tablespoonfuls of butter, add one-fourth cupful of flour and when well blended stir in two-thirds cupful of milk. Cook until thick and boiling. Remove from the fire and beat in the yolks of two eggs, one and one-half cupfuls of grated or finely cut cheese, one teaspoonful of salt and cayenne to season. Spread in a shallow pan to cool. When cold and firm, turn out on a floured board or plate, cut in small squares, dip in fine crumbs, beaten egg and again in crumbs and fry in deep fat heated to 390 degrees. Drain on soft paper and serve hot.

Cheese and Hominy Puffs

Mix and sift two tablespoonfuls of flour, one teaspoonful of baking powder and one-fourth teaspoonful of salt. Beat one egg yolk with one-third cupful of milk, add one cupful of cold, boiled hominy and mix until smooth. Add the flour mixture and one cupful of grated, dry cheese. Fold in the stiffly beaten egg white and drop from a teaspoon into deep fat heated to 390 degrees or until it will brown a piece of bread in forty seconds. Fry to a golden brown, drain and serve with tomato sauce and grated cheese.

Toasted Bacon and Cheese Sandwiches

Toast bread cut one-fourth of an inch thick until it is brown on one side. Turn over and cover the untoasted side with very thin slices of American or Swiss cheese. Sprinkle the cheese with paprika and a little cayenne pepper and cover with two or three thin strips of bacon. Toast until the bacon is browned and the cheese melted. Cover with a second slice of toast and serve at once with a garnish of watercress.

Red Rarebit

Mince one green pepper, one teaspoonful onion, and two tablespoonfuls celery. Cook in three tablespoonfuls of melted butter or margarine for five minutes or until just beginning to turn yellow. Stir in four tablespoonfuls of flour and when well blended, add two cupfuls of tomato juice or one can tomato soup diluted with water to make two cupfuls. Cook until boiling, strain, add one-half teaspoonful each salt and baking soda and two cupfuls cheese cut in fine pieces. Cook until the cheese melts, stirring constantly. Then stir in one well beaten egg and serve at once on toast or crackers.

Polenta with Cheese

Scald two cupfuls of milk and mix with two cupfuls of boiling water. Heat to the boiling point. Mix one cupful of cornmeal with one teaspoonful salt and enough cold water to make a smooth paste. Stir into the boiling liquid and cook in a double boiler for two hours. Then add one half-pound cheese grated or cut fine and pour the mixture into a shallow pan one-half inch thick. When cold, cut in squares, dip in beaten egg and then in fine crumbs and fry in deep hot fat. Serve with tomato sauce.

Macaroni Rarebit

Boil one half pound macaroni until tender, then drain. Melt two tablespoonfuls butter or margarine, add one-half pound grated cheese and stir over hot water until the cheese is melted. Beat two eggs, add one cupful milk and stir into the cheese mixture with one teaspoonful salt and one-half teaspoonful Worcestershire sauce. Cook, stirring constantly, until the mixture thickens. Pour the sauce over the macaroni and serve at once. Garnish with pimentoes, parsley or stuffed olives.

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